

## ABSTRACT

1       A time-domain time-scale modification method based on the  
2 synchronous overlap-and-add method consists of a  
3 generalization of the envelope-matching time-scale  
4 modification method. The cross-correlation function employs  $n$   
5 most significant bits rather than merely the sign bit of the  
6 prior envelope matching method. This provides higher accuracy  
7 for  $n > 1$ . A fixed-size cross-correlation buffer is employed  
8 to eliminate the need for normalization inside the search  
9 loop. This invention makes full use of fast/parallel shift and  
10 multiply-and-accumulate (MAC) instructions of current digital  
11 signal processors to become at the same time faster and more  
12 precise than envelope-matching time-domain time-scale  
13 modification.